CLAIMS

What is claimed is:

1. A method in a data processing system having a workflow that models a process and a plan that reflects an instance of the process and that has been created from the workflow, the

5   method comprising the steps of:

initiating execution of the plan such that the instance of the process is at least partially performed;

receiving a characteristic about the at least partial performance of the plan; and

modifying the workflow to reflect the characteristic so that a subsequent plan created

10   from the modified workflow has the received characteristic.

2. The method of claim 1, wherein the workflow includes an activity that has a duration and the plan includes a task that performs the activity for the duration, and wherein the received characteristic is a new duration.

3. The method of claim 2, wherein the step of modifying the workflow comprises the steps

15   of:

determining whether the duration of the task is within a predetermined tolerance of the duration of the activity; and

when it is determined that the duration of the task is within the predetermined tolerance of the duration of the activity, modifying the duration of the activity to correspond to the

20   duration of the task.

4. The method of claim 1, wherein the workflow includes an activity that has a role and the plan includes a task that performs the activity, wherein the task has a same role as the activity and has a resource assigned to perform the role, and wherein the received characteristic is the resource assigned to perform the role.

5.   The method of claim 4, wherein the step of modifying the workflow comprises the steps of:

determining whether the resource was manually assigned by a user; and

when it is determined the resource was manually assigned by a user,

identifying another role that the manually assigned resource is capable of performing; and

replacing the role of the activity with the other role.

6.   The method of claim 4, wherein the role has a skill and a corresponding skill strength and wherein the step of modifying the workflow comprises the steps of:

determining whether the resource was manually assigned by a user; and

when it is determined the resource was manually assigned by a user,

identifying a skill of the resource that corresponds to that of the role; and

modifying the skill strength of the role to be substantially equivalent to a corresponding skill strength of the resource.

7.   The method of claim 1, wherein the workflow includes an activity that has a default-successor and the plan includes a task that performs the activity, and wherein the received characteristic corresponds to a successor of the task.

8.   The method of claim 7, wherein the step of modifying the workflow comprises the steps of:

determining whether the default-successor of the activity corresponds to the successor of the task; and

when it is determined that the default-successor of the activity does not correspond to the successor of the task, modifying the workflow to reflect the successor of the task.

9.   The method of claim 8, wherein the step of modifying the workflow to reflect the successor of the task comprises the steps of:

determining whether the workflow has another activity that corresponds to the successor of the task; and

when it is determined that the workflow does not have another activity that corresponds to the successor of the task, adding another activity that corresponds to the successor of the task to the workflow.

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10.   The method of claim 9, wherein the step of modifying the workflow to reflect the successor of the task further comprises the steps of:

when it is determined that the workflow has another activity that corresponds to the successor of the task, modifying the activity to have a new default-successor that corresponds to the other activity.

11.   The method of claim 10, wherein the step of modifying the workflow to reflect the successor of the task further comprises the steps of:

when it is determined that the workflow has another activity that corresponds to the successor of the task,

determining whether the activity has a non-default-successor that corresponds to the other activity; and

when it is determined that activity does not have a non-default-successor that corresponds to the other activity, removing the default-successor of the activity from the workflow.

12.   The method of claim 1, wherein the step of modifying the workflow further comprises the steps of:

notifying a user of a recommendation to modify the workflow to reflect the received characteristic;

receiving a reply to the notification;

determining whether the reply authorizes the recommendation; and

when it is determined that the reply authorizes the recommendation,

modifying the workflow to reflect the characteristic.

13.   A method in a data processing system with a workflow that models a process and a plurality of plans generated from the workflow that reflects instances of the process, the method comprising the steps of:

   receiving a modification to a characteristic of at least one of the plans;

5   determining whether a number of the modified plans exceeds a predefined threshold; and

   when it is determined that the number exceeds the predefined threshold,

   performing the modification on the workflow.

14.   The method in claim 13, wherein the workflow has an activity, wherein each of the plurality of plans has a task that performs the activity for a duration, wherein the receiving step

10   includes the step of receiving a new duration for the task in the at least one of the plans, and wherein the step of performing includes the step of modifying a duration of the activity in the workflow to reflect the new duration.

15.   The method in claim 13, wherein the workflow has an activity that has a default-successor, wherein each of the plurality of plans has a task that performs the activity, the task of

15   each plan has a successor that is consistent with the default-successor of the activity when the task is created, wherein the receiving step includes the step of receiving a new successor for the task that is inconsistent with the default-successor of the activity in the at least one of the plans, and wherein the step of performing includes the step of modifying the default-successor of the activity to reflect the new successor.

20   16.   The method in claim 13, wherein the workflow has an activity, wherein each of the plurality of plans has a task that includes a role to perform the activity, wherein the receiving step includes the step of receiving a new role for the task in the at least one of the plans, and wherein the step of performing includes the step of modifying a role of the activity in the workflow to reflect the new role.

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17.   The method in claim 13, wherein the workflow has an activity, wherein each of the plurality of plans has a task that includes the role to perform the activity and that includes a resource assigned to perform the role, wherein the role of the task is consistent with a role of the activity, wherein the receiving step includes the step of receiving a new resource for the task in the at least one of the plans, and wherein the step of performing includes the steps of:

determining whether the new resource is capable of performing the role;

when it is determined that the new resource is not capable of performing the role,

identifying another role that the new resource is capable of performing; and

modifying the role of the activity to reflect the other role.

18.   The method in claim 17, further comprising the steps of:

when it is determined that the new resource has the capability to perform the role,

identifying a skill assigned to the new resource that matches a skill assigned to the role of the activity; and

modifying the role of the activity to have a corresponding skill strength that is substanstially the same as a strength of the skill assigned to the new resource.

19.   The method in claim 13, wherein the number of the modified plans is a percentage of the plurality of the plans that constitute the modified plans, and wherein the predefined threshold is a predefined percentage of the plans.

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20.   A method in a data processing system with a workflow that models a process and a plurality of plans generated from the workflow that reflect instances of the process, the method comprising the steps of:

initiating execution of each plan such that the instances of the process are at least

5   partially performed;

receiving a characteristic about the performance of at least one of the plans that is inconsistent with the workflow;

determining whether a number of the inconsistent plans exceeds a predefined threshold; and

10   when it is determined that the number exceeds the predefined threshold,

modifying the workflow to reflect the inconsistent characteristic of the at least one of the plans so that a subsequent plan created from the modified workflow has the inconsistent characteristic.

21.   The method in claim 20, wherein the workflow has an activity, wherein each of the

15   plurality of plans has a task that performs the activity for a duration, and wherein the received characteristic is a new duration.

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22.   A computer-readable medium containing instructions for controlling a data processing system to perform a method, the data processing system having a workflow that models a process and a plan that reflects an instance of the process and that has been created from the workflow, the method comprising the steps of:

5   initiating execution of the plan such that the instance of the process is at least partially performed;

receiving a characteristic about the at least partial performance of the plan; and

modifying the workflow to reflect the characteristic so that a subsequent plan created from the modified workflow has the received characteristic.

10   23.   The computer-readable medium of claim 22, wherein the workflow includes an activity that has a duration and the plan includes a task that performs the activity for the duration, and wherein the received characteristic is a new duration.

24.   The computer-readable medium of claim 23, wherein the step of modifying the workflow comprises the steps of:

15   determining whether the duration of the task is within a predetermined tolerance of the duration of the activity; and

when it is determined that the duration of the task is within the predetermined tolerance of the duration of the activity, modifying the duration of the activity to correspond to the duration of the task.

20   25.   The computer-readable medium of claim 22, wherein the workflow includes an activity that has a role and the plan includes a task that performs the activity, wherein the task has a same role as the activity and has a resource assigned to perform the role, and wherein the received characteristic is the resource assigned to perform the role.

26. The computer-readable medium of claim 25, wherein the step of modifying the workflow comprises the steps of:

    determining whether the resource was manually assigned by a user; and

    when it is determined the resource was manually assigned by a user,

        identifying another role that the manually assigned resource is capable of performing; and

        replacing the role of the activity with the other role.

27. The computer-readable medium of claim 25, wherein the role has a skill and a corresponding skill strength and wherein the step of modifying the workflow comprises the steps of:

    determining whether the resource was manually assigned by a user; and

    when it is determined the resource was manually assigned by a user,

        identifying a skill of the resource that corresponds to that of the role; and

        modifying the skill strength of the role to be substantially the same as a corresponding skill strength of the resource.

28. The computer-readable medium of claim 22, wherein the workflow includes an activity that has a default-successor and the plan includes a task that performs the activity, and wherein the received characteristic corresponds to a successor of the task.

29. The computer-readable medium of claim 28, wherein the step of modifying the workflow comprises the steps of:

    determining whether the default-successor of the activity corresponds to the successor of the task; and

    when it is determined that the default-successor of the activity does not correspond to the successor of the task, modifying the workflow to reflect the successor of the task.

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30.   The computer-readable medium of claim 29, wherein the step of modifying the workflow to reflect the successor of the task comprises the steps of:

determining whether the workflow has another activity that corresponds to the successor of the task; and

when it is determined that the workflow does not have another activity that corresponds to the successor of the task, adding another activity that corresponds to the successor of the task to the workflow.

31.   The computer-readable medium of claim 30, wherein the step of modifying the workflow to reflect the successor of the task further comprises the steps of:

when it is determined that the workflow has another activity that corresponds to the successor of the task, modifying the activity to have a new default-successor that corresponds to the other activity.

32.   The computer-readable medium of claim 31, wherein the step of modifying the workflow to reflect the successor of the task further comprises the steps of:

when it is determined that the workflow has another activity that corresponds to the successor of the task,

determining whether the activity has a non-default-successor that corresponds to the other activity; and

when it is determined that activity does not have a non-default-successor that corresponds to the other activity, removing the default-successor of the activity from the workflow.

33.   The computer-readable medium of claim 22, wherein the step of modifying the workflow further comprises the steps of:

notifying a user of a recommendation to modify the workflow to reflect the received characteristic;

receiving a reply to the notification;

determining whether the reply authorizes the recommendation; and

when it is determined that the reply authorizes the recommendation,

modifying the workflow to reflect the characteristic.

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34.   A computer-readable medium containing instructions for controlling a data processing system having a workflow and a plurality of plans generated from the workflow, the method comprising the steps of:

receiving a modification to a characteristic of at least one of the plans;

determining whether a number of the modified plans exceeds a predefined threshold; and

when it is determined that the number exceeds the predefined threshold,

performing the modification on the workflow.

35.   The computer-readable medium of claim 34, wherein the workflow has an activity, wherein each of the plurality of plans has a task that performs the activity for a duration, wherein the receiving step includes the step of receiving a new duration for the task in the at least one of the plans, and wherein the step of performing includes the step of modifying a duration of the activity in the workflow to reflect the new duration.

36.   The computer-readable medium of claim 34, wherein the workflow has an activity that has a default-successor, wherein each of the plurality of plans has a task that performs the activity, the task of each plan has a successor that is consistent with the default-successor of the activity when the task is created, wherein the receiving step includes the step of receiving a new successor for the task that is inconsistent with the default-successor of the activity in the at least one of the plans, and wherein the step of performing includes the step of modifying the default-successor of the activity to reflect the new successor.

37.   The computer-readable medium of claim 34, wherein the workflow has an activity, wherein each of the plurality of plans has a task that includes a role to perform the activity, wherein the receiving step includes the step of receiving a new role for the task in the at least one of the plans, and wherein the step of performing includes the step of modifying a role of the activity in the workflow to reflect the new role.

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38.   The computer-readable medium of claim 34, wherein the workflow has an activity, wherein each of the plurality of plans has a task that includes the role to perform the activity and that includes a resource assigned to perform the role, wherein the role of the task is consistent with a role of the activity, wherein the receiving step includes the step of receiving a new resource for the task in the at least one of the plans, and wherein the step of performing includes the steps of:

determining whether the new resource has a capability to perform the role;

when it is determined that the new resource does not have the capability to perform the role,

identifying another role that the new resource is capable of performing; and

modifying the role of the activity to reflect the other role.

39.   The computer-readable medium of claim 38, further comprising the steps of:

when it is determined that the new resource has the capability to perform the role,

identifying a skill assigned to the new resource that matches a skill assigned to the role of the activity; and

modifying the role of the activity to have a corresponding skill strength that is substanstially the same as a strength of the skill assigned to the new resource.

40.   The computer-readable medium of claim 34, further comprising the step of receiving the predefined threshold from a user.

41.   The computer-readable medium of claim 34, wherein the number of the modified plans is a percentage of the plans where a modification has been received, and wherein the predefined threshold is a predefined percentage of the plans.

42.   A computer-readable medium containing instructions for controlling in a data processing system having a workflow and a plurality of plans generated from the workflow, the method comprising the steps of:

initiating execution of each plan such that instances of the process are at least partially performed;

receiving a characteristic about the performance of at least one of the plans that is inconsistent with the workflow;

determining whether a number of the inconsistent plans exceeds a predefined threshold; and

when it is determined that the number exceeds the predefined threshold,

modifying the workflow to reflect the inconsistent characteristic of the at least one of the plans so that a subsequent plan created from the modified workflow has the inconsistent characteristic.

43.   The computer-readable medium of claim 42, wherein the workflow has an activity, wherein each of the plurality of plans has a task that performs the activity for a duration, and wherein the received characteristic is a new duration.

44.   A data processing system comprising:

a secondary storage device further comprising a workflow that models a process and a plan that reflects an instance of the process and that has been created from the workflow;

a memory device further comprising a program that activates the plan such that the instance of the process is at least partially performed, that receives a characteristic about the at least partial performance of the plan, and that modifies the workflow to reflect the characteristic so that a subsequent plan created from the modified workflow has the received characteristic; and

a processor for running the program.

45.   The data processing system of claim 44, wherein the workflow includes an activity that has a duration and the plan includes a task that performs the activity for the duration, and wherein the received characteristic is a new duration.

46.   The data processing system of claim 44, wherein the workflow includes an activity that has a role and the plan includes a task that performs the activity, wherein the task has a same role as the activity and has a resource with a capability, wherein the received characteristic is the resource with the capability, and wherein the role does not reflect the capability.

47.   The data processing system of claim 46, wherein the modified workflow includes a new role for the activity that reflects the capability of the resource.

48.   The data processing system of claim 44, wherein the workflow includes an activity that has a default-successor and the plan includes a task that performs the activity, wherein the received characteristic corresponds to a successor of the task, and wherein the default-successor of the activity does not correspond to the successor of the task.

49.   The data processing system of claim 48, wherein the modified workflow reflects the successor of the task.

50.   The data processing system of claim 48, wherein the modified workflow includes another activity that reflects the successor of the task.

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51.   The data processing system of claim 50, wherein the workflow has another activity that corresponds to the successor of the task, and wherein the modified workflow includes a new default-successor for the activity that corresponds to the other activity.

52.   The data processing system of claim 51, wherein the modified workflow reflects the
5   removal of the default-successor of the activity from the workflow.

53.   A system having a workflow that models a process and a plan that reflects an instance of the process and that has been created from the workflow, the system comprising:

means for initiating execution of the plan such that the instance of the process is at least partially performed;

means for receiving a characteristic about the at least partial performance of the plan; and

means for modifying the workflow to reflect the characteristic so that a subsequent plan created from the modified workflow has the received characteristic.